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**CORRECTED LETTER CLAIMING RIGHT OF PRIORITY**

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Sir:


Under the provisions of 35 USC 119 and 37 CFR 1.55, applicants hereby claim the right of priority based on:

Japanese Patent Application No. 2001-067950, filed March 12, 2001.

A certified copy of said Japanese patent document was submitted on September 18, 2001.

Respectfully submitted,

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DECLARATION

I, Michiyuki MORITA, a national of Japan,  
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do hereby solemnly and sincerely declare:

- 1) THAT I am well acquainted with the Japanese language  
and English language, and
- 2) THAT the attached is a full, true, accurate and  
faithful translation into the English language made  
by me of Japanese Patent Application No. 2001-067950.

The undersigned declares further that all  
statements made herein of his own knowledge are true and  
that all statements made on information and belief are  
believed to be true; and further that these statements  
were made with the knowledge that willful false statements  
and the like so made are punishable by fine or imprisonment,  
or both, under section 1001, of Title 18 of the United  
States Code and that such willful false statements may  
jeopardize the validity of the application or any patent  
issuing thereon.

Signed this 27th day of June, 2006.

  
Michiyuki MORITA



2001-067950

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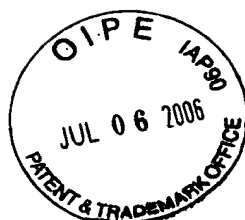
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[Kind of Document]      Description

[Title of the Invention]      ELECTRIC APPLIANCE RENTING  
SYSTEM

[Scope of Claim for a Patent]

5      [Claim 1]

An electric appliance renting system in which  
a use contractor who has made a contract with a service  
providing company leases an electric appliance rented  
out from said service providing company,

10            wherein said electric appliance can send data  
exhibiting a work situation thereof to a rent managing  
server which said service providing company has, through  
a communication line, and also can receive data relating  
to a rent inclusive of an amount of electric power  
15 thereof from said rent managing server.

[Claim 2]

An electric appliance renting system in which  
a user who has made a contract with a service providing  
company leases a plurality of electric appliances rented  
20 out from said service providing company,

wherein at least one of said plurality of  
electric appliances can send data exhibiting a work  
situation of said plurality of electric appliances to a  
rent managing server which said service providing  
25 company has, through the Internet, and also can receive  
rents, inclusive of an amount of electric power thereof,

of said plurality of electric appliances from said rent managing server.

[Claim 3]

An electric appliance renting system according  
5 to claim 2, wherein said plurality of electric  
appliances have at least one first electric appliance  
which is connected to the Internet, and a second  
electric appliance which is connected to said first  
electric appliance through a communication line.

10 [Claim 4]

An electric appliance renting system in which  
a use contractor who has made a contract with a service  
providing company leases an electric appliance rented  
out from said service providing company,

15 wherein said service providing company has a  
rent managing server for collecting data relating to a  
work situation of said electric appliance rented out to  
a use contractor through a communication network to  
operate arithmetically a rent inclusive of an amount of  
20 electric power, which is to be paid by the use  
contractor, from the data relating to the work situation  
of said electric appliance thus collected, and said rent  
managing server can output the rent to said electric  
appliance through said communication network.

25 [Claim 5]

An electric appliance renting system according  
to claim 4, wherein said rent managing server  
arithmetically operates the consumed electric power rate

of said electric appliance thus rented out for an electric power supplying company for supplying said electric appliance thus rented out with the electric power, and can provide said electric power supplying  
5 company with data relating to the consumed electric power rate through the communication network.

[Claim 6]

An electric appliance renting system according to claim 4, wherein said service providing company pays  
10 the consumed electric power rate of said electric appliance thus rented out which is arithmetically operated by said rent managing server to said electric power supplying company for supplying said electric appliance thus rented out with the electric power.

15 [Claim 7]

An electric appliance renting system according to claim 4, wherein the electric appliance thus rented out has a first information electric appliance which is connected to said rent managing server of said service  
20 providing company through a communication network and a second information electric appliance which is connected to said first information electric appliance through a communication line.

[Claim 8]

25 An electric appliance renting system according to claim 7, wherein said first information electric appliance can display thereon data relating to work situations and consumed electric power rates of said

first and second information electric appliances.

[Claim 9]

An electric appliance renting system according to claim 7, wherein said first information electric  
5 appliance can carry out maintenance diagnosis or replacement diagnosis of said information electric appliance which is connected to said first information electric appliance through said communication line.

[Claim 10]

10 An electric appliance renting system for renting electric appliances, comprising: at least one electric appliance which is rented out, inclusively of an electric power rate, from a service providing company to a use contractor; and a rent managing server for  
15 managing the rented electric appliance which said service providing company has,

wherein said electric appliance has communication means for sending work result data to said rent managing server, and said rent managing server has  
20 communication means for receiving the work result data sent from said electric appliance.

[Claim 11]

An electric appliance renting system according to claim 10, wherein said rent managing server includes  
25 means for calculating a charge which is to be charged for a use contractor leasing said electric appliance in accordance with the work result data and for calculating an electric power rate which is to be paid to an



electric power supplying company in accordance with the work result data.

[Claim 12]

An electric appliance renting system according to claim 10, wherein said rent managing server records and manages thereat the work result data.

[Claim 13]

An electric appliance renting system according to claim 10, further comprising an information terminal through which a rent is carried out inclusively of an electric power rate, wherein said electric appliance, said information terminal and said rent managing server include communication means for communicating with said information terminal, communication means for communicating with said electric appliance and said rent managing server, and communication means for communicating with said information terminal, respectively, and said information terminal includes means for recording the work result data, means for operating arithmetically an amount of consumed electric power from the work result data, and means for sending the data relating to an amount of consumed electric power thus arithmetically operated to said rent managing server.

[Claim 14]

An electric appliance renting system according to claim 11, wherein said electric appliance includes operation controlling means for controlling an operation

thereof, and said rent managing server includes means for obtaining an amount of consumed electric power of said electric appliance on the basis of control data provided by said operation controlling means and for  
5 obtaining a use rate inclusive of an electric power rate which is to be charged for a use contractor and an electric power rate which is to be paid to said electric power supplying company.

[Claim 15]

10 An electric appliance renting system according to claim 10, further comprising electric power measuring means for measuring electric power of said electric appliance, wherein said rent managing server includes means for operating arithmetically a use charge  
15 inclusive of an electric power rate which is to be charged for a use contractor and an electric power rate which is to be paid to said electric power company on the basis of an amount of electric power measured by said electric power measuring means.

20 [Claim 16]

An electric appliance renting system according to claim 10, wherein said rent managing server can send data relating to a situation of a half-way progress of use of the electric power to said electric appliance.

25 [Claim 17]

An electric appliance renting system according to claim 13, wherein said rent managing server can send data relating to a situation of a half-way progress of

use of the electric power to said electric appliance.

[Claim 18]

An electric appliance renting system according to claim 11, wherein said rent managing server carries  
5 out an arithmetic operation in such a way that when the operation result data of said electric appliance is equal to or smaller than a predetermined amount, a consumed electric power rate is decided as a fixed amount, while when the operation result data of the  
10 electric appliance exceeds the predetermined amount, the consumed electric power rate is increased in accordance with the work result data.

[Claim 19]

An electric appliance renting system according  
15 to claim 10, wherein said rent managing server includes judgment means for on the basis of the work result data sent from said electric appliance, carrying out judgment of abnormality of said electric appliance and for  
judging on the basis of the judgment result whether or  
20 not the maintenance needs to be carried out.

[Claim 20]

An electric appliance renting system according to claim 10, wherein said rent managing server includes means for generating a running pattern on the basis of  
25 the work result data sent from said electric appliance and comparing using the generated running pattern, the total cost up to a scrapping processing of said electric appliance with the total cost up to the scrapping

processing of an electric appliance which is replaceable with said electric appliance to execute the replacement judgment for said electric appliance.

[Detailed Description of the Invention]

5 [0001]

[Technical Field Pertinent to the Invention]

The present invention relates in general to an electric appliance renting system for renting electric appliances. More particularly, the invention relates to  
10 an electric appliance renting system for renting electric appliances inclusively of an electric power rate.

[0002]

[Prior Art]

15 The fact is that almost all of the electric appliances, from the home electric appliances, are purchased to be used. When a purchaser uses any of the electric appliances, the electric power is supplied thereto from an electric power company (electric power  
20 company designated for each district in Japan) with which the purchaser makes a contract. When an electric appliance develops trouble, if this trouble occurs within the guarantee period thereof, this electric appliance is repaired free of charge, which when an  
25 electric appliance develops trouble after a lapse of the guarantee period thereof, this electric appliance is repaired with an admission fee. Even when this electric

appliance is scrapped, the scrapping of specified appliances such as television set and home refrigerators will not be free of charge from a point of view of promoting recycling as of April of 2001.

5       [0003]

          In a system for purchasing and using such electric appliances, the payment of the cash becomes maximum at the purchase time. For this reason, a great deal of money for payment needs to be prepared at the  
10 purchase time. In order to prevent a sum of money for the payment from becoming enormous at the purchase time, an electric appliance may be bought on the installment plan by utilizing the finance or the like of a financial company in some cases.

15       [0004]

          Now, it is as described above that the electric power which is used to operate an electric appliance is supplied from the electric power company designated for each district with which the purchaser  
20 makes a contract. When collecting the electric power rate, a sum of the specific charge corresponding to an amount of consumed electric power measured by a watthour meter every home and the basic charge is charged for each of homes. In the case where each of home pays the  
25 charge, for the sake of convenience of the payment, in general, the bank automatic transfer is carried out. While the present condition is that for the measurement of an amount of consumed electric power, which each of

homes has consumed, a measurement person goes round  
homes to carry out the measurement, there arises the  
inconvenience that the measurement is not efficiently  
carried out due to the installation positions of the  
5 watthour meters or watchdogs, and so forth. Then, in  
order to solve this inconvenience, it is described in  
JP-A-10-111326 that the data relating to an amount of  
electric power which is measured from the watthour meter  
is sent to the electric power company through the  
10 communication line.

[0005]

[Problem to be solved by the Invention]

In the above-mentioned conventional situation  
of utilizing electric appliances, if an electric  
15 appliance is purchased to be used, then the initial cost  
becomes enormous. Even if after the purchase of the  
electric appliance, the more excellent appliance is made  
public and then even if a purchaser desires the re-  
purchase, the purchase thereof becomes difficult in  
20 terms of funds. As a result, a purchaser must use a  
appliance having the large power consumption for a long  
term, and hence the inconvenience occurs in terms of the  
energy saving. In addition, in the case where a  
purchaser makes a finance contract with a financial  
25 company in order to reduce the initial cost, when viewed  
totally, the interest on money and the cost of the  
charge are excessively required. At this time, since  
the financial company changes the rate of the interest

on money and the charge in correspondence to the bad debt risk, for each of general consumers, the ratio of the interest on money and the charge occupying the cost of the appliance becomes relatively large. In addition, 5 in the case as well where a consumer leases an electric appliance from the present lease company, this is also applied thereto.

[0006]

Now, when using an electric appliance, the 10 total sum of the initial cost required in the purchase thereof, the running cost such as the electric power rate and the repair cost, and the scrapping cost required in the scrapping thereof is the cost required from the purchase of the electric appliance up to the 15 scrapping thereof. It is desirable for users that the life cycle cost as this total sum is less. However, it is very difficult to estimate the life cycle cost and as a result, it is difficult for users or consumers to select the optimal appliance.

20 [0007]

In the case where for example, an air conditioner for a home is purchased to be used, since the situation of the heat radiation and the installation situation of the heat source apparatus(es) in a room are 25 difficult in accordance with a room where the air conditioner is installed, the heat balance is changed. In addition, the work pattern and the rate of operation are changed in accordance with the taste of a user. For

this reason, the life cycle cost is changed every user, and also the optimal appliance which is fitted to a user is changed every user in terms of the life cycle cost.

[0008]

5                Furthermore, the energy saving is desired in order to prevent the Earth warning. However, since the energy saving is also changed due to the performance of electric appliances, the use situation of a user, and the running pattern, it is difficult to select the  
10 appliance which is fitted to the taste of a user and promotes the energy saving. In addition, in the system, described in the above-mentioned official gazette, for checking an amount of consumed electric power in each of homes through the communication line, though the labor  
15 of checking an amount of consumed electric power in each of homes is surely reduced, the life cycle cost is not taken into consideration at all.

[0009]

              In this connection, when an electric appliance  
20 is intended to be scrapped since the use purpose has been attained, it is better in terms of the recycle possibility to return the electric appliance of interest to the source of the manufacturer. In this case, the recycle has the advantage that the Earth environment is  
25 protected and the low cost is realized. However, in the present distribution root of the electric appliances, such a measure is behind and hence it becomes the problem in the future to take such a measure.



[0010]

In the light of the foregoing, the present invention has been made in order to solve the above-mentioned problems associated with the prior art, and it is therefore an object of the present invention to construct an electric appliance renting system which is capable of reducing the life cycle cost. It is another object of the present invention to reduce the initial investment of a user for an electric appliance. It is still another object of the present invention to construct an electric appliance renting system which is capable of protecting the Earth environment. It is yet another object of the present invention to construct an electric appliance renting system which is capable of making the man power saving possible. Then, it is an object of the present invention to attain at least any one of these objects.

[0011]

[Means for Solving the Problem]

According to the first feature of the present invention for attaining the above-mentioned objects, there is provided an electric appliance renting system in which a use contractor who has made a contract with a service providing company leases an electric appliance rented out from the service providing company, wherein the electric appliance can send the data exhibiting the work situation thereof to a lease managing server, which the service providing company has, through a

communication line, and also can receive the data relating to a rent inclusive of an amount of electric power thereof from the rent managing server.

[0012]

5           According to the second feature of the present invention for attaining the above-mentioned objects, there is provided an electric power appliance renting system in which a user who has made a contract with a service providing company leases a plurality of electric  
10 appliances rented out from the service providing company, wherein at least one of the plurality of electric appliances can send data exhibiting the work situation of the plurality of electric appliances to a rent managing server, which the service providing  
15 company has, through the Internet, and also can receive rents, inclusive of an amount of electric power thereof, of the plurality of electric appliances from the rent managing server.

[0013]

20           In addition, preferably, the plurality of electric appliances have at least one first electric appliance which is connected to the Internet, and a second electric appliance which is connected to the first electric appliance through a communication line.

25           [0014]

          According to the third feature of the present invention for attaining the above-mentioned objects, there is provided an electric appliance renting system

in which a use contractor who has made a contract with a service providing company leases an electric appliance rented out from the service providing company, wherein the service providing company has a rent managing server  
5 for collecting the data relating to the work situation of the electric appliance rented out to a use contractor through a communication network to operate arithmetically a rent inclusive of an amount of electric power, which is to be paid by the use contractor, from  
10 the data relating to the work situation of the electric appliance thus collected, and the rent managing server can output the rent to the electric appliance through the communication network.

[0015]

15 Then, in this feature, it is desirable that the rent managing server arithmetically operates the consumed electric power rate of the electric appliance thus rented out for an electric power supplying company for supplying the electric appliance thus rented out  
20 with the electric power, and can provide the electric power supplying company with the data relating to the consumed electric power rate through a communication network.

[0016]

25 In addition, the service providing company may pay the consumed electric power rate of the electric appliance thus rented out which is arithmetically operated by the rent managing server to the electric

power supplying company for supplying the electric  
appliance thus rented out with the electric power. In  
addition, the electric appliances thus rented out may  
have a first information electric appliance which is  
5 connected to the rent managing server of the service  
providing company through a communication network and a  
second information electric appliance which is connected  
to the first information electric appliance through a  
communication line. Furthermore, the first information  
10 electric appliance may display thereon the data relating  
to the work situation and the consumed electric power  
rates of the first and second information electric  
appliances. Also, the first information electric  
appliance may carry out the maintenance diagnosis or the  
15 replacement diagnosis of the information electric  
appliance which is connected to the first information  
electric appliance through the communication line.

[0017]

According to the fourth feature of the present  
20 invention for attaining the above-mentioned objects,  
there is provided an electric appliance renting system  
for renting electric appliances, including: at least one  
electric appliance which is rented out, inclusively of  
the electric power rate, from a service providing  
25 company to a use contractor; and a rent managing server  
for managing the rented electric appliance(s) which the  
service providing company has, wherein the electric  
appliance has communication means for sending work

result data to the rent managing server, and the rent managing server has communication means for receiving the work result data sent from the electric appliance.

[0018]

5                   Then, in the fourth feature, the rent managing server includes means for calculating a charge which is to be charged for a use contractor renting the electric appliance in accordance with the work result data and for calculating the electric power rate which is to be  
10 paid to an electric power supplying company in accordance with the work result data. The rent managing server records and manages thereat the work result data. The electric appliance renting system may further includes an information terminal through which the rent  
15 is carried out inclusively of the electric power rate, and the electric appliance, the information terminal and the rent managing server may have communication means for communicating with the information terminal, communication means for communicating with the electric  
20 appliance and the rent managing server, and communication means for communicating with the information terminal, respectively, and the information terminal may have means for recording the work result data, means for operating arithmetically an amount of  
25 consumed electric power from the work result data, and means for sending the data relating to an amount of consumed electric power thus arithmetically operated to the rent managing server.

[0019]

Furthermore, the electric appliance may have operation controlling means for controlling the operation thereof, and the rent managing server may have  
5 means for obtaining an amount of consumed electric power of the electric appliance on the basis of the control data provided by the operation controlling means and for obtaining the use rate inclusive of an electric power rate which is to be charged for a use contractor and the  
10 electric power rate which is to be paid to the electric power supplying company.

[0020]

In addition, in the above-mentioned fourth feature, electric power measuring means for measuring  
15 the electric power of the electric appliance is provided, and the rent managing server has means for operating arithmetically the use charge inclusive of an electric power rate which is to be charged for a use contractor and the electric power rate which is to be  
20 paid to the electric power company on the basis of an amount of electric power measured by the electric power measuring means. The rent managing server can send the data relating to the situation of the half-way progress of use of the electric power to the electric appliance.  
25 The rent managing server carries out the arithmetic operation in such a way that when the operation result data of the electric appliance is equal to or smaller than a predetermined amount, the consumed electric power

rate is decided as the fixed amount, while when the operation result data of the electric appliance exceeds the predetermined amount, the consumed electric power rate is increased in accordance with the work result data. The rent managing server includes judgement means for on the basis of the work result data sent from the electric appliance, carrying out the judgement of abnormality of the electric appliance and for judging on the basis of the judgement result whether or not the maintenance needs to be carried out. The rent managing server may include means for generating a running pattern on the basis of the work result data sent from the electric appliance to compare the total cost up to the scrapping processing of the electric appliance with the total cost up to the scrapping processing of an electric appliance which is replaceable with the electric appliance to execute the replacement judgement for the electric appliance.

[0021]

[Mode for Carrying Out the Invention]

The preferred embodiments of the present invention will hereinafter be described in detail with reference to the accompanying drawings. Fig. 1 is a block diagram showing a configuration of a system of an embodiment of an electric appliance renting system according to the present invention. In the present embodiment, an electric appliance which can send/receive the information to/from the outside through the

communication means such as the Internet will  
hereinbelow be referred to as "an information electric  
appliance" for short, when applicable. Then, in order  
that a rented information electric appliance may be  
5 distinguished from an electric appliance which was  
purchased in the normal way, in the rented information  
electric appliance, "e-" is added to the head of a name  
of an electric appliance as in an e-air conditioner 31.

[0022]

10 In Fig. 1, a use contractor 1 possesses the  
group of information electric appliances such as an e-  
air conditioner 31, an e-refrigerator 32, an e-  
television 33, and an e-information terminal 16 which  
were rented out on the basis of a use contract which  
15 will be described later, and an electric appliance 40  
which is out of the use contract. Then, the group of  
information electric appliances 31 to 33 and the  
electric appliance 40 are detachably connected to an  
indoor power source line 12 through their plug sockets  
20 and plugs (not shown). The indoor power source line 12  
is connected through a wattmeter 15 to a power-  
transmission line 11 for the electric power which is  
supplied from an electric power supplying company 5.

[0023]

25 The e-information terminal 16 having an input  
unit 161 for inputting therethrough the information of  
the information electric appliances and a display output  
unit 160 for displaying thereon the data relating to the



work situation and the like of the group of information electric appliances 31 to 33 is also connected to the indoor power source line 12 through a plug socket and a plug (not shown). The group of information electric  
5 appliances 31 to 33 is individually connected to or connected in series with the e-information terminal 16 through a communication line 20. The e-information terminal 16 collects the work information of the group of electric appliances 31 to 33 connected thereto.  
10 Then, the collected information itself of the group of electric appliances 31 to 33 or the information which is obtained by processing the collected information in the e-information terminal 16 is sent to a rent managing server 200, which a service providing company 2  
15 possesses, through the Internet at all times.

[0024]

The rent managing server 200 of the service providing company which is connected to the Internet 10 includes: a recording unit 203 for recording therein the  
20 information from a plurality of use contractors 1, 1, ... which is sent thereto through the Internet 10; an input unit 201 for converting the information recorded in the recording unit 203 into the management data; an arithmetic operation unit 202 for converting the  
25 information into the management data; and a display/output unit 204 for displaying and outputting the input data and the management data.

[0025]

The internet connection appliances such as the computers which an electric power supplying company 5 for supplying the group of information electric appliances 31 to 33 with the electric power, a  
5 manufacturer 3 which manufactured the group of information electric appliances 31 to 33, a financial company 7 which will be described later, a local self-governing body, a town assembly, and a local shop or store 8 to which a use contractor belongs possess  
10 respectively are connected to the Internet 10.

[0026]

The collection of the electric appliance rental charge and the electric power rate in the present embodiment constructed as described above will  
15 hereinbelow be described. With respect to the group of electric appliances 31 to 33 and the e-information terminal 16, the rental or lease contract is made between a use contractor and the service providing company 2. The payment contract for the electric power  
20 rate is also contained in the rental or lease contract.

[0027]

In other words, in the contract in which the use charge inclusive of the electric power rate for one month from the first day of the month to the end of the  
25 month for each of months is paid in the next month, if the rent of interest is the rent for a long term, then the lease charge for the group of electric appliances 31 to 33, as shown in Fig. 7, becomes the fixed amount for

a period of time of the contract. In addition, in the case where the contract is cancelled in the middle of a period of time of the long term rent contract, the cancel charge is collected. In the case where an information electric appliance is rented out only for a short period of time, as shown in Fig. 8, the first year of the rental charge is highest and the rental charge is gradually decreased on and after the second year. The reason that in such a way, the payment pattern is changed between the case where an information electric appliance is rented out for a short period of time and the case where an information electric appliance is rented out for a long period of time is that the group of information electric appliances 31 to 33 are degraded due to the use thereof, and also the technology progresses due to a lapse of a time to reduce relatively the value of the appliances. On the other hand, if an amount of consumed electric power is equal to or smaller than amount of integrated electric power for each of months which was determined in the rental contract of an information electric appliance, then the consumed electric power rate is decided as the fixed amount. When an amount of consumed electric power exceeds an amount of integrated electric power which was determined in the rental contract of an information electric appliance, the specific charge which is obtained by multiplying an excess by a unit cost is added to be charged for a use contractor.

[0028]

Once the rental or lease contract is established, the data relating to the work results of the e-air conditioner 31, the e-refrigerator 32 and the e-television 33 which use contractor 1, 1, ... leases is sent from the e-information terminal 16 to the service providing company 2 through the Internet 10. On the other hand, the rent managing server 200 which the service providing company 2 possesses, on the basis of the data relating to the work results of the group of information electric appliances 31 to 33 sent from the use contractor 1, 1, ..., arithmetically operates a charge demand amount for each of months based on the contract, or a cost amount on occasion to return the amount thus obtained to the e-information terminal 10 of the use contractor 1 through the Internet 10.

[0029]

In this connection, the e-information terminal 16 is provided with input means 161 for being able to input therethrough the desires from the use contractor 1 such as the additional lease or replacement of the information electric appliances 31 to 33, or the additional rent of the different information electric appliance(s). In addition, the data relating to the trouble(s) generated in the group of electric appliances 31 to 33 which the use contractor 1 leased is also sent to the rent managing server 200 of the service providing company 2 through the e-information terminal 16.

[0030]

Now, in order to calculate the rent inclusive of the electric power rate, which is to be charged for the use contractors 1, 1, ..., in accordance with the  
5 work results thereof, the service providing company 2, on the basis of the above-mentioned method, obtains the electric power rate of all of the information electric appliances, which are rented out to the use contractors 1, 1, ..., using the rent managing server 200 and adds  
10 up the electric power rate together with the rent to charge the rents thus obtained for the users 1, 1, ..., respectively. At the same time, the service providing company 2 calculates the consumed electric power rate, which is to be paid to the electric power supplying  
15 company 5 using the rent managing server 200 thereof in accordance with the work result data of the group of information electric appliances. In this connection, the rent managing server 200 sums up the consumed electric power rate of all of the information electric  
20 appliances such as the e-air conditioner 31, the e-refrigerator 32, the e-television 33 and the e-information terminal 16 which are rented out inclusively of the electric power rate.

[0031]

25 Since the use contractor 1, 1, ... uses his/her own electric appliance 40 in addition to the group of electric appliances 31 to 33 for which the rent contract was made with the service providing company 2,

it is difficult to distinguish between the electric power rate for the rent and the electric power rate for his/her payment amount only on the basis of the information from the wattmeter 15. Then, an amount of  
5 consumed electric power of his/her own electric appliance 40 is obtained as follows.

[0032]

That is, the total amount of consumed electric power of the e-information terminal 16, the e-air  
10 conditioner 31, the e-refrigerator 32, the e-air conditioner 33 and other electric appliance 40 which are all connected to the indoor power source line 12 is measured by the wattmeter 15. On the other hand, since the work result data is sent from the e-information  
15 terminal 16, the e-air conditioner 31, the e-refrigerator 32 and the e-television 33 either to the e-information terminal 16 or to the rent managing server 200 of the service providing company, either the e-information terminal 16 or the rent managing server 200  
20 of the service providing company calculates an amount of consumed electric power of the e-information terminal 16, the e-air conditioner 31, the e-refrigerator 32 and the e-television 33 on the basis of the work result data sent thereto. Then, an amount of electric power thus  
25 calculated is subtracted from an amount of electric power which is previously measured by the wattmeter 15. Then, the use contractor 1 who made the rental contract with the service providing company 2 pays the use charge

inclusive of the electric power rate of the e-  
information terminal 16 and the group of information  
electric appliances 31 to 33 to the service providing  
company 2. On the other hand, the use contractor 1 pays  
5 the electric power rate of his/her own electric  
appliance 40 to the electric power supplying company 5.

[0033]

Since the service providing company 2 makes  
the rental contract with a large number of use  
10 contractors 1, 1, ..., an amount of consumed electric  
power also becomes enormous. For this reason, the  
service providing company can make a large contract with  
the electric power supplying company 5, i.e., can make  
the contract therewith for which the discount is made as  
15 compared with each of the electric power contracts which  
individual use contractors make with the electric power  
supplying company. By the way, the service providing  
company 2 pays the sum of the consumed electric power  
rate of all of the group of electric appliances (the e-  
20 information terminal 16, the e-air conditioner 31, the  
e-refrigerator 32 and the e-television 33) and the use  
charge of the power-transmission line 11 to the electric  
power supplying company.

[0034]

25 Now, the rent managing server 20 of the  
service providing company 2 is also adapted to manage  
the inter-electronic commercial transaction of the  
manufacturer 3, the electric power supplying company 5,

the financial company 7, and the local shop or store,  
the town assembly and the self-governing body 8. Now,  
by the transaction with the local shop or store, the  
town assembly and the self-governing body 8 is meant the  
5 advertisement income which is obtained in such a way  
that the local shop or store, the town assembly and the  
self-governing body 8 transmits distributively the  
advertisement of its products to the rented e-  
information terminal 16. By including the advertisement  
10 income, it is possible to reduce the use charge  
inclusive of the electric charge rate.

[0035]

The description will hereinbelow be given with  
respect to the operation of starting the contract, the  
15 normal flow and the operation of ending the contract  
with reference to Fig. 2. Arrows 110, 111, 112, ... of  
dashed lines indicate the flow of the information and  
the memory, while arrows 114, 120, ... of solid lines  
indicate the flow of the goods, the work and the  
20 electric power. In principle, the memory is paid on the  
basis of the financial transaction through the Internet.

[0036]

The description will hereinbelow be given with  
respect to the operation when starting the use contract  
25 or when starting the additional use contract. A part  
indicated in the right end of Fig. 2 by BEGINNING 101  
corresponds to this operation.

An order that the use contractor 1 wants to



take the rent service inclusive of the electric power rate of an information electric appliance is given from the use contractor 1 to the service providing company 2 (Step 110). Then, the service providing company 2 gives  
5 the manufacturer 3 an order for the information electric appliance (Step 111). At the same time, the service providing company 2 makes an additional contract with the electric power supplying company 5 with respect to the use of the electric power of the ordered information  
10 electric appliance (Step 112). Then, the manufacturer 3 sells the ordered information electric appliance to the service providing company 2 (Step 113). The service providing company 2 sends the purchased information electric appliance to the use contractor 1 (Step 114).  
15 At the same time, the service providing company 2 makes a finance contract with the financial company 7 (Step 115). Then, the service providing company 2 which has been furnished with funds from the financial company 7 on the basis of the finance contract pays the price for  
20 the information electric appliance to the manufacturer 7 (Step 116).

[0037]

Next, the description will hereinbelow be given with respect to the operation for a period of time  
25 of the normal contract. This operation corresponds to the operation in repetition 102 part shown in the right end of Fig. 2. For a period of time of the contract, this operation is repeatedly carried out. In this

repetitive operation 102, a part indicated by "IF  
NECESSARY" 103 is executed only when as a result of  
carrying out the maintenance diagnosis and the  
replacement diagnosis using the software of the expert  
5 system in the rent managing server 200 on the basis of  
the work result data, this process is judged to be  
necessary.

[0038]

The information electric appliance which has  
10 been rented out to the use contractor 1 is supplied with  
the electric power from the electric power supplying  
company at all times (Step 120). The work result data  
such as an amount of consumed electric power is sent to  
the rent managing server 200 of the service providing  
15 company 2 through the Internet 10 (Step 121). The rent  
managing server 200 of the service providing company 2  
receives and records the work result data such as an  
amount of consumed electric power which has been sent  
from the rented information electric appliance. Then,  
20 the rent managing server 200 sums up an amount of  
consumed electric power every month to notify the use  
contractor 1 of the use situation and to charge the use  
charge inclusive of the electric power rate for the use  
contractor 1 (Step 122). Then, the use contractor 1  
25 pays the use charge inclusive of the electric power rate  
which has been charged therefor (Step 123).

[0039]

The service providing company 2 repays the

contracted finance to the financial company 7 every term which was determined on the basis of the contract made with the financial company 7 (Step 124). Then, the service providing company 2 sums up an amount of  
5 consumed electric power of all of the rented information electric appliances to pay the electric power rate to the electric power supplying company 5 every term which was determined on the basis of the contract made with the electric power supplying company 5 (Step 125).

10 [0040]

Next, the description will hereinbelow be given with respect to the outline of the maintenance and replacement operation in the part indicated by "IF NECESSARY" 103. The details will be described later  
15 with reference to Fig. 3.

The rent managing server 200 of the service providing company 2 carries out the maintenance diagnosis and the replacement diagnosis on the basis of the result data of the consumed electric power and the  
20 measured information from the various kinds of sensors mounted to the information electric appliances. If the degree of such information exceeds the critical value which is previously stored in the rent managing server 200, then the rent managing server 200 judges that the  
25 maintenance or the replacement is necessary to instruct the service providing company to carry out the maintenance or the replacement. Then, the service providing company 2 carries out the maintenance work or

the replacement work in accordance with the instruction for the maintenance or the replacement issued from the rent managing server 200 (Step 130).

[0041]

5           The case where the use contract is ended or the case of the end of the partial use contract in which a part of the use contract of the information electric appliance 15 for which the use contract is made with the service providing company will hereinbelow be described  
10 with reference to the part indicated by "BEGINNING" in the right end of Fig. 2. The service providing company is informed of the end of the use contract or the end of a part of the use contract from the use contractor (Step 140). After having carried out this communication, the  
15 service providing company collects the information electric appliance for which the use contract has been ended (Step 141). Then, the service providing company notifies the electric power supplying company of that the use contractor changes the current contract over to  
20 the new contract in which the electric power contract amount is reduced by an amount of electric power with which the current contract has been made with the service providing company for the information electric appliance for which the use contractor has ended the use  
25 contract (Step 142).

[0042]

Next, the details of the repetitive operation for a period of time of the use contract shown in Fig. 2

will hereinbelow be described with reference to a flow chart of Fig. 3. The work result data such as an amount of consumed electric power of the information electric appliance rented out to the use contractor 1 is sent to the rent managing server 200 included in the service providing company 2 (Step 221). The rent managing server 200 of the service providing company 2 aggregates an amount of consumed electric power from the first day of the month on the basis of the work result data set thereto and calculates an amount of consumed electric power until the time point of interest and an amount of possible consumed electric power up to the end of the month to send the resultant data to the e-information terminal 16 of the use contract 1 (Step 221). The data sending in Steps 220 and 221 is carried out at predetermined time intervals, or when a request is made from the rent managing server 200 of the service providing company through the Internet 10, or when a request is made from the e-information terminal 16 of the use contractor 1 through the Internet 10.

[0043]

Fig. 6 shows one example of the relationship between an amount of consumed electric power the data of which is sent from the service providing company and an amount of possible consumed electric power up to the end of the month. Such information is displayed on the e-information terminal 16 (Step 261 in Fig. 3). A part of a solid line 601 indicates an amount of consumed

electric power which has been actually consumed from the first day of the month, and a part of a dotted line 602 indicates an amount of possible consumed electric power. A solid line 603 indicates the upper limit value of an amount of electric power which can be consumed with the fixed amount charge. Then, if an amount of actually consumed electric power exceeds this upper limit value, then the specific charge is added for an amount of exceed electric power. The use contractor 1 can confirm the situation of an amount of consumed electric power in real time from the screen of the e-information terminal 16. As a result, the use contractor 1 can finely manage an amount of consumed electric power and hence can grasp the over-consumption of the electric power, and the like.

[0044]

The rent managing server 200 of the service providing company 2 sums up an amount of consumed electric power of the last month in the first day of the month to charge the use charge inclusive of the electric power rate for the last month for the use contractor (Step 263). The service providing company 2 pays the electric power rate to the electric power supplying company 5 every term which was determined in the contract and also repays the finance to the financial company 7 (Step 264).

[0045]

The rent managing server 200 of the service

providing company 2 checks periodically the work result data to judge whether or not it is necessary to carry out the maintenance of the information electric appliance (Step 265). If it is judged in Step 265 that  
5 it is necessary to carry out the maintenance of the information electric appliance (Step 265), then the service providing company 2 commissions a maintenance commission trader 21 to carry out the maintenance work (Step 231). The maintenance commission trader 21  
10 subjects the information electric appliance for which the maintenance is required to the maintenance (Step 223). Then, after completion of the maintenance, the rent managing server 200 of the service providing company 2, on the basis of the work result data (Step  
15 224) sent from the information electric appliance for which the maintenance has been carried out, judges whether or not it is necessary to carry out further maintenance (Step 266). If it is judged in Step 265 that it is necessary to carry out further maintenance  
20 again (YES in Step 266), then the service providing company 2 commissions the maintenance commission trader 21 to carry out the maintenance work once again. If in the maintenance judgement at the second time, it is judged that it is unnecessary to carry out the  
25 maintenance since the information electric appliance operates normally (NO in Step 266), then the charge is paid to the maintenance commission trader 21 (Step 267).

[0046]

In addition, if it is judged that it is necessary to carry out the maintenance since the information electric appliance operates normally in Step 265 (NO in Step 265), then it is judged whether or not  
5 it is necessary to carry out the replacement (Step 268). In this judgement, the case where the present appliance is used and the case where a new appliance is used which is newly put on the market after the rent are compared with each other. In other words, on the basis of the  
10 work result data of the information electric appliances which has been accumulated, the use charge inclusive of the electric power rate when the information electric appliance is used which is newly put on the market and the sum of the total cost until now of the rented  
15 information electric appliance and the cost which is estimated to be generated in the future are compared with each other. If by taking the function(s) as well added to the new appliance into consideration, the service providing company judges that there is the merit  
20 in terms of the charge and the function for a customer, then the service providing company proposes the replacement of the information electric appliance for the customer. Then, when the customer consents to that proposal, YES is selected in the replacement judgement  
25 268, while in other cases, NO is selected in the replacement judgement 268.

[0047]

When YES is selected in the replacement



judgement 268, the service providing company 2 orders a new information electric appliance from the manufacturer 3 (Step 209). At the same time, the manufacturer 3 requests a regeneration commission trader 22 to send the  
5 ordered information electric appliance. The service providing company 2 commissions the regeneration commission trader 22 to carry out the work of replacing the old information electric appliance with the new information electric appliance and the management of the  
10 old information electric appliance (Step 210). After having received the new information electric appliance from the manufacturer 3, the regeneration commission trader 22 carries the new information electric appliance to the use contractor 1 to replace the old information  
15 electric appliance with the new information electric appliance to collect the old information electric appliance (Step 241). Then, the regeneration commission trader 20 judges whether or not the collected information electric appliance is regeneratable (Step  
20 242).

[0048]

If it is judged in Step 243 that the collected information electric appliance is regeneratable (YES is selected in Step 242), then the collected old  
25 information electric appliance is regenerated (Step 243). The information electric appliance thus regenerated is rented out to the contractor 250 who uses the regenerated appliance at the low priced charge.

When the contractor 250 who uses the regenerated appliance can not be found out, the regenerated information electric appliance is damped to be sold or stocked as the appliance for the maintenance.

5 [0049]

On the other hand, if it is judged in Step 242 that the regeneration is impossible (NO is selected in Step 242), then the collected information electric appliance is delivered together with the recycling price to the manufacturer 3 which manufactured the information electric appliance of interest to request the manufacturer 3 to recycle a part of the appliance which can be used again after the recycling and to scrap a part thereof which can not be recycled by any means (Step 245). The manufacturer 3, on the basis of this request, recycles a part of the appliance which can be used again after the recycling and scraps a part of the appliance which can not be recycled by any means (Step 213). Then, the service providing company 2 pays the price for the replacement commission work to the regeneration commission trader 22.

[0050]

By the way, while the destination of the deliver of the old information electric appliance which was collected in the replacement is decided as the manufacturer 3 which manufactured the information electric appliance, alternatively, the destination of the deliver may be a waste treatment trader. In

addition, while the trader for regenerating the information electric appliance is decided as the regeneration commission trader, alternatively, it may be a company or a manufacturer different from the replacement trader. In any case, it is desirable that the trader of interest is the trader which reutilizes a part of the appliance which can be reused. Since in the scrapping, the information of the work result is left, it is possible to estimate the degradation state of the information electric appliance, and hence the reutilization of components and parts can be judged and at the same time the quality improvement in the recycle materials can be realized.

[0051]

Since the work result data of the rented information electric appliances is accumulated in the rent managing server 200, the service providing company 2 can carry out the replacement proposal in which the operation pattern, the operation rate and the like of the use contractor 1 are taken into consideration. Since for the use contractor 1, the replacement is proposed at the suitable time, the total cost can be reduced.

[0052]

The description will hereinbelow be given with respect to the case where the information electric appliance is an e-air conditioner with reference to Fig. 4. The e-air conditioner includes a compressor 53 for

compressing the cooling medium, an outdoor heat  
exchanger 51 for carrying out the heat exchange between  
the cooling medium and the outdoor air, an outdoor air  
blower 55 for sending the cooled wind to the outdoor  
5 heat exchanger 51, an expansion valve 54 which is  
adapted to operate by the adiabatic expansion of the  
cooling medium, and an indoor heat exchanger 52 for  
carrying out the heat exchange between the cooling  
medium and the indoor air. In addition, the e-air  
10 conditioner also includes an air blower 56 for sending  
air to the indoor heat exchanger to send the air-  
conditioned wind to a room, a temperature sensor 57 for  
measuring the temperature in a room, and a power source  
59 connected to an indoor electric power line. A signal  
15 sent from the temperature sensor 57 is taken in the  
operation controlling means, and on the basis of this  
signal, the operations of the compressor 53, the outdoor  
air blower 55 and the outdoor air blower 56 are  
controlled. The work result data of the e-air  
20 conditioner is recorded in data recording means 62. The  
timing and the like of this recording are controlled by  
recording communication controlling means 61. By the  
way, the recording time and the like are recorded at a  
time when a clock 63 generates the clock data. The work  
25 result data thus recorded is sent to the rent managing  
server of the service providing company via  
communication means connected to the Internet.

[0053]

More specifically, if the operation  
controlling means 58 operates/stops the e-air  
conditioner, the recording communication controlling  
means 61 aggregates an amount of electric power in the  
5 ON state to calculate an amount of consumed electric  
power and then the data recording means 62 records the  
work result data together with a time the data of which  
has been outputted from the clock 63. The data such as  
the indoor temperature and the indoor setting  
10 temperature which the temperature sensor 57 has measured  
is also recorded as one of the work result data together  
with a time the data of which has been outputted from  
the clock 63 in the data recording means 62. The  
temperature measurement data is also treated as the work  
15 result data, whereby the maintenance diagnosis and the  
replacement diagnosis can be carried out with higher  
accuracy, and also the labor costs of the maintenance  
can be reduced. In addition, the life sensor, the  
acoustic sensor and the like which are dedicated to the  
20 maintenance diagnosis and the replacement diagnosis may  
be provided to add the measurement result of the sensors  
to the work result data. If such dedicated sensors are  
provided, then the life judgement can be carried out  
with higher accuracy.

25 [0054]

The communication means 64 sends the recorded  
work result data to the rent managing server 200 at  
predetermined time intervals or when a request has been

made from the rent managing server 200. The rent  
managing server 200 calculates the electric power rate  
which is to be charged for the use contractor 1 and the  
electric power which is to be paid to the electric power  
5 company 5 in accordance with the data relating to an  
amount of consumed electric power sent thereto.

[0055]

In the maintenance diagnosis in which the rent  
managing server 200 carries out the simulation by  
10 utilizing the work result data, the data of the  
simulation result and the data of the work result are  
compared with each other, and whether or not there is  
the abnormal data is judged by using the software  
included in the maintenance expert system. The  
15 maintenance expert system is programmed in the format of  
IF ~, THEN ~. This maintenance expert system compares  
the data of the simulation result and the data of the  
work result with each other, and when there is the  
abnormal data, instructs the failure contents and the  
20 maintenance corresponding thereto. According to the  
present system, the maintenance diagnosis can be carried  
out from a distance, the appliance does not need to be  
looked at on the site, and hence it is possible to  
reduce the labor costs and the maintenance time which  
25 are required for the maintenance.

[0056]

In the replacement diagnosis of diagnosing the  
replacement time of the information electric appliance

on the basis of the running pattern generated from the work result data, the work situation of a new appliance and the appliance which is currently rented out is simulated by the rent managing server 200 to carry out the comparison with respect to the use charge inclusive of the electric power rate and the necessary energy. Further, the comparison is carried out with respect to the new function(s) added to the new appliance, and by using the replacement expert system, the intelligible proposal contents in which the comparison with respect to the use charge inclusive of the electric power rate, the energy and the additional function(s) is described is generated for the use contractor 1. Then, the proposal contents are sent to the e-information terminal to display thereon the replacement contents for the use contractor 1. Thereby, the suitable replacement proposal can be carried out every use contractor.

[0057]

An example of a change of the air-conditioner is shown in Fig. 5. A point of difference of the present change from the embodiment shown in Fig. 4 is that the e-air conditioner includes electric power measuring means 65. The electric power which is measured by the electric power measuring means 65 is aggregated to obtain an amount of consumed electric power which is in turn stored together with the time data generated from the clock 63 in the form of the work result data in the data storage means. The present

change is suitable when the data of an amount of consumed electric power can not be obtained from the operation controlling means 58.

[0058]

5                   According to the above-mentioned embodiments and change, since the service providing company 2 can carry out the large transaction to the manufacturer 3, the electric power supplying company 5, and the financial company 7, the service providing company 2 can  
10 carry out the transaction under the more advantageous condition in terms of the cost than any of general consumers who carries out a small transaction. In addition, since the information of the rented electric appliances can be obtained every moment through the  
15 Internet, it is possible to reduce the labor costs for the management and the administration of the service with which the electric appliances are rented inclusively of the electric charge rate.

[0059]

20                   In addition, according to the present embodiment, since any of the use contractors can lease the electric appliances on the basis of the rent contract, the use contractor does not need to prepare the initial investment as the large cost required to  
25 purchase the electric appliance(s). In addition, since the use contractor is informed of the detailed use charge inclusive of the electric power rate every month or periodically every information electric appliance, it



is possible to clarify the expenses for a long term and hence it is possible to estimate the budget of the expenses. Furthermore, since the cost required up to the life of the information electric appliance which the use contractor uses becomes the value which is obtained by aggregating the use charge inclusive of the monthly electric power rate of the rented information electric appliance by the number of months for use, it is possible to grasp readily the total cost up to the life.

10 [0060]

Further, since the work result data can be collected from an out-of-the-way place and also the maintenance diagnosis can be carried out from an out-of-the-way place, it is possible to reduce the labor costs and a time which are required for the maintenance. In addition, since the use contractor can get the service providing company to cope immediately with the maintenance at a time when the maintenance needs to be carried out, the stop of use of the information electric appliance due to the failure can be prevented.

[0061]

An example of a change of the present invention will hereinbelow be described. The present change is the case corresponding to the example shown in Fig. 4 in which the operation controlling means 58 for controlling the work of the individual information electric appliances can not obtain the electric power consumption information. Since the consumed electric

power data can not be obtained, the ON time, the temperature of the information electric appliance, and the like are measured, and the electric power values of the individual information electric appliances are  
5 estimated on the basis of the simulation. The estimated electric power values are aggregated to obtain the predicted value of an amount of consumed electric power. On the basis of the predicted value of an amount of consumed electric power, the electric power rate which  
10 is to be charged for the use contractor 1, and the electric power rate which is to be paid to the electric power supplying company 5 are respectively calculated. While since an amount of consumed electric power is the predicted value, there is the possibility that the error  
15 may be generated, the unit price of the electric power rate which is to be paid to the electric power supplying company 5 is increased to absorb that error. According to the present change, it is unnecessary to provide the electric power measuring means in the individual  
20 information electric appliances, and hence it is possible to reduce the cost of the system.

[0062]

Another embodiment of the present invention is shown in Fig. 9. A point of difference of the present  
25 embodiment from the embodiment shown in Fig. 1 is that the e-information terminal 16 includes an arithmetic operation unit 162 and a recording unit 163 in addition to the display/output unit 160 and the input unit 161.

As a result, in the embodiment shown in Fig. 9, the e-information terminal 16 is adapted to carry out a part of the functions which the rent managing server 200 of the service providing company 2 carried out in the  
5 embodiment of Fig. 1. More specifically, the e-information terminal 16 records the work result data of the e-information terminal 16 itself, the e-air conditioner 31, the e-refrigerator 32 and the e-television 33 in the recording unit 163. Then, an  
10 amount of consumed electric power is summed up by the arithmetic operation unit 162, and the use charge inclusive of the electric power rate of the use contractor 1 is summed up and the maintenance diagnosis and the replacement diagnosis are carried out. The data  
15 relating to an amount of consumed electric power and the use charge inclusive of the electric power rate which have been respectively summed up, and the maintenance diagnosis result and the replacement diagnosis result which have been respectively carried out are sent to the  
20 rent managing server 20 of the service providing company 2 through the Internet.

[0063]

According to the present embodiment, an amount of communication and the number of times of  
25 communications through the Internet can be reduced as compared with the embodiment shown in Fig. 1. In addition, since an amount of communication data of one time can be reduced, it is also possible to increase the

frequency in diagnosis, and the frequency in data collection of each of the information electric appliances.

[0064]

5                   By the way, while in any of the above-mentioned embodiments and change, the data relating to the work situation of the information electric appliances 31 to 33 is sent to the rent managing server 200 of the service providing company through the e-  
10 information terminal 16, it is to be understood that each of the information electric appliances 31 to 33 may have the sending function and the display function. In this case, there is offered the advantage that the e-information terminal becomes unnecessary, and the  
15 necessity and the like of the maintenance of the individual information electric appliances can be readily grasped.

[0065]

                  In addition, while the communication line from  
20 the information electric appliances to the rent managing server of the service providing company is constructed by the Internet, it may also be other communication line such as the telephone line or CATV. In this case, there is offered the advantage that the collection of the  
25 information and the display thereof can be readily carried out using the existing equipment.

[0066]

Also, while in the above-mentioned

embodiments, the use charge of the power-transmission line is paid from the electric power supplying company to the power-transmission line possessing company, it is to be understood that the service providing company may  
5 directly pay the use charge of the power-transmission line to the power-transmission line possessing company. Further, while the number of electric power supplying companies with which the service providing company makes a contract is decided as one, a plurality of electric  
10 power supplying companies may be selected in accordance with the situation of supplying the electric power. As a matter of course, the electric power supplying company for supplying the information electric appliances with the electric power may be different from the electric  
15 power supplying company for supplying the general dielectric appliances which a user purchased with the electric power. As a result, while in Japan where the electric power supply is being liberalized, the electric power company for supplying the electric power is  
20 basically determined every area, it is possible that only the information electric appliances are supplied with the electric power from the electric power supplying company which is newly joined therein, and hence the market for the electric power companies which  
25 are newly joined therein is extended. In addition, while in the above-mentioned embodiments, using jointly or the like of the specific system is determined in the contract, of course, the charge contract is not limited

thereto and hence may be variously changed in accordance with the situation.

[0067]

#### [Advantages of the Invention]

5           As set forth hereinabove, according to the present invention, since it is possible to construct a system for renting electric appliances, the initial investment of a user for electric appliance(s) can be reduced. In addition, since the recycle system can be  
10 established on the basis of the rent, it is possible to obtain an electric appliance renting system which is adapted to protect the Earth environment. Also, it is possible to realize the man power saving of the staff required for the maintenance and the like.

#### 15 [Brief Description of the Drawings]

[Fig. 1]

Fig. 1 is a block diagram showing a configuration of a system of an embodiment of an electric appliance renting system according to the  
20 present invention.

[Fig. 2]

Fig. 2 is a flow chart illustrated in Fig.1.

[Fig. 3]

Fig. 3 is a detailed flow chart useful in  
25 explaining a part which is shown by the repetitive operation for a period of time of use contract in Fig. 2.

[Fig. 4]

Fig. 4 is a block diagram showing a configuration of an embodiment of an information electric appliance according to the present invention.

5 [Fig. 5]

Fig. 5 is a block diagram showing a configuration of an example of a change of the information electric appliance shown in Fig. 4.

[Fig. 6]

10 Fig. 6 is a view useful in explaining one example of a screen which is displayed on an information terminal.

[Fig. 7]

15 Fig. 7 is a graphical representation for explaining an example of a rental contract of an information electric appliance according to the present invention.

[Fig. 8]

20 Fig. 8 is a graphical representation for explaining an example of a rental contract of an information electric appliance according to the present invention.

[Fig. 9]

25 Fig. 9 is a block diagram showing a configuration of a system of another embodiment of an electric appliance renting system according to the present invention.

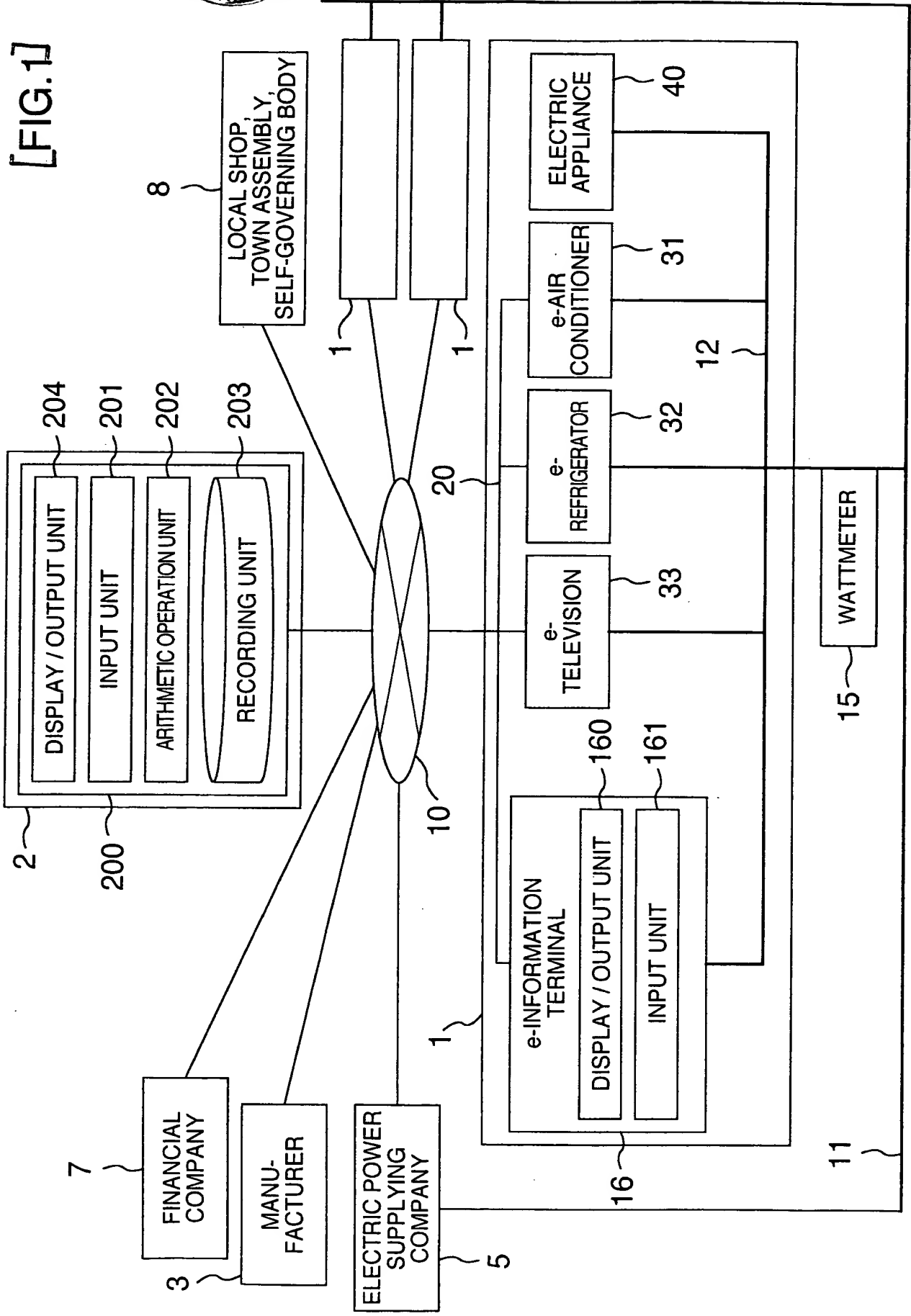
[Description of Reference Numerals]

1 --- use contractor, 2 --- service providing  
company, 3 --- manufacturing company, 5 --- electric  
power supplying company, 7 --- financial company, 10 ---  
5 Internet, 11 --- power transmission line, 12 --- indoor  
power source line, 16 --- e-information terminal, 20 ---  
communication line, 31 --- e-air conditioner, 32 --- e-  
refrigerator, 33 --- e-television, 40 --- electric  
appliance, 51 --- outdoor heat-exchanger, 52 --- indoor  
10 heat-exchanger, 53 --- compressor, 54 --- expansion  
valve, 55 --- outdoor air blower, 56 --- indoor air  
blower, 57 --- sensor, 58 --- operation controlling  
means, 59 --- power source, 61 --- recording  
communication controlling means, 62 --- data recording  
15 means, 63 --- clock, 64 --- communication means, 65 ---  
electric power measuring means, 200 --- rent managing  
server.



[Fig. 1]

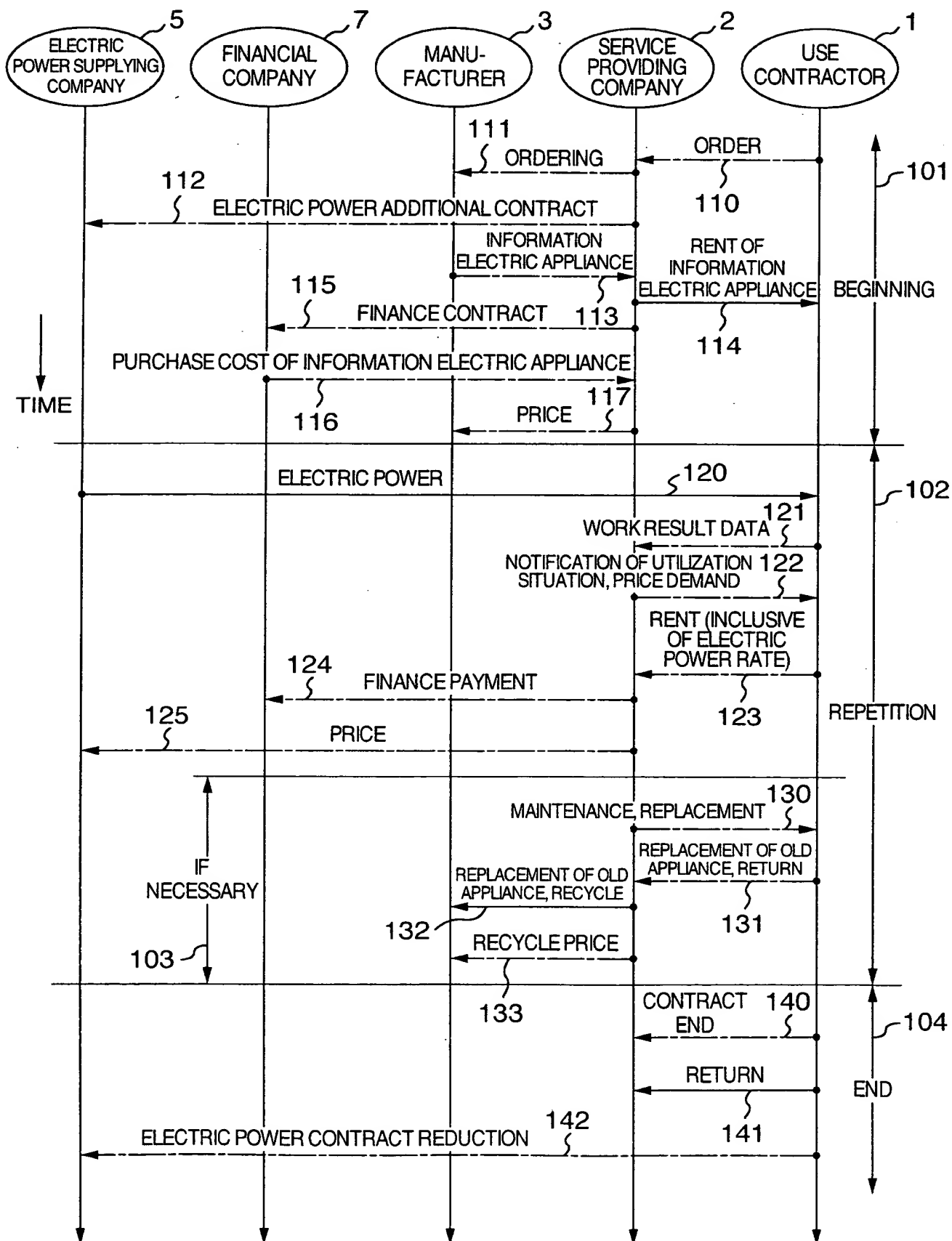
[FIG.1]



[Fig. 2]



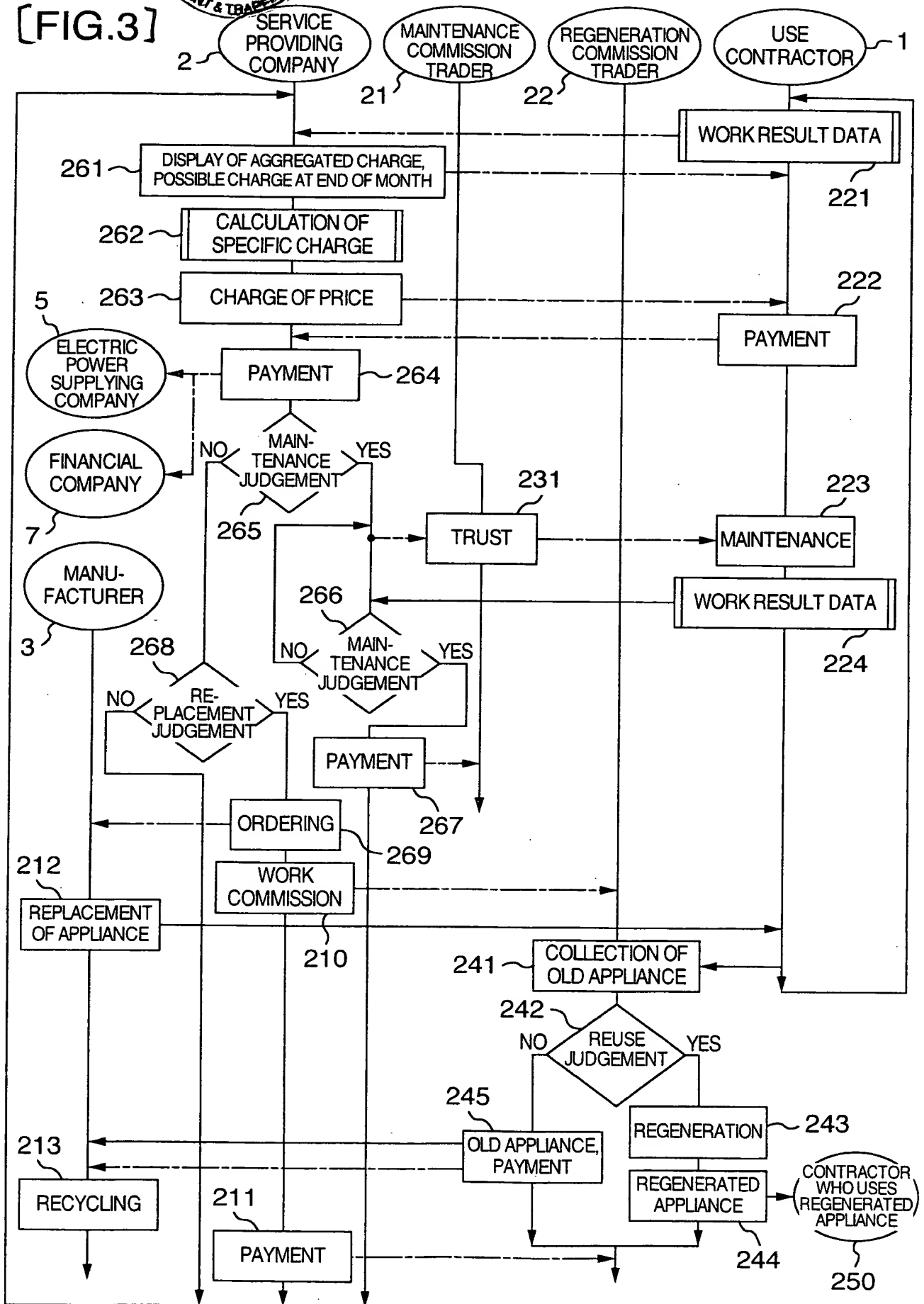
[FIG.2]



[Fig. 3]



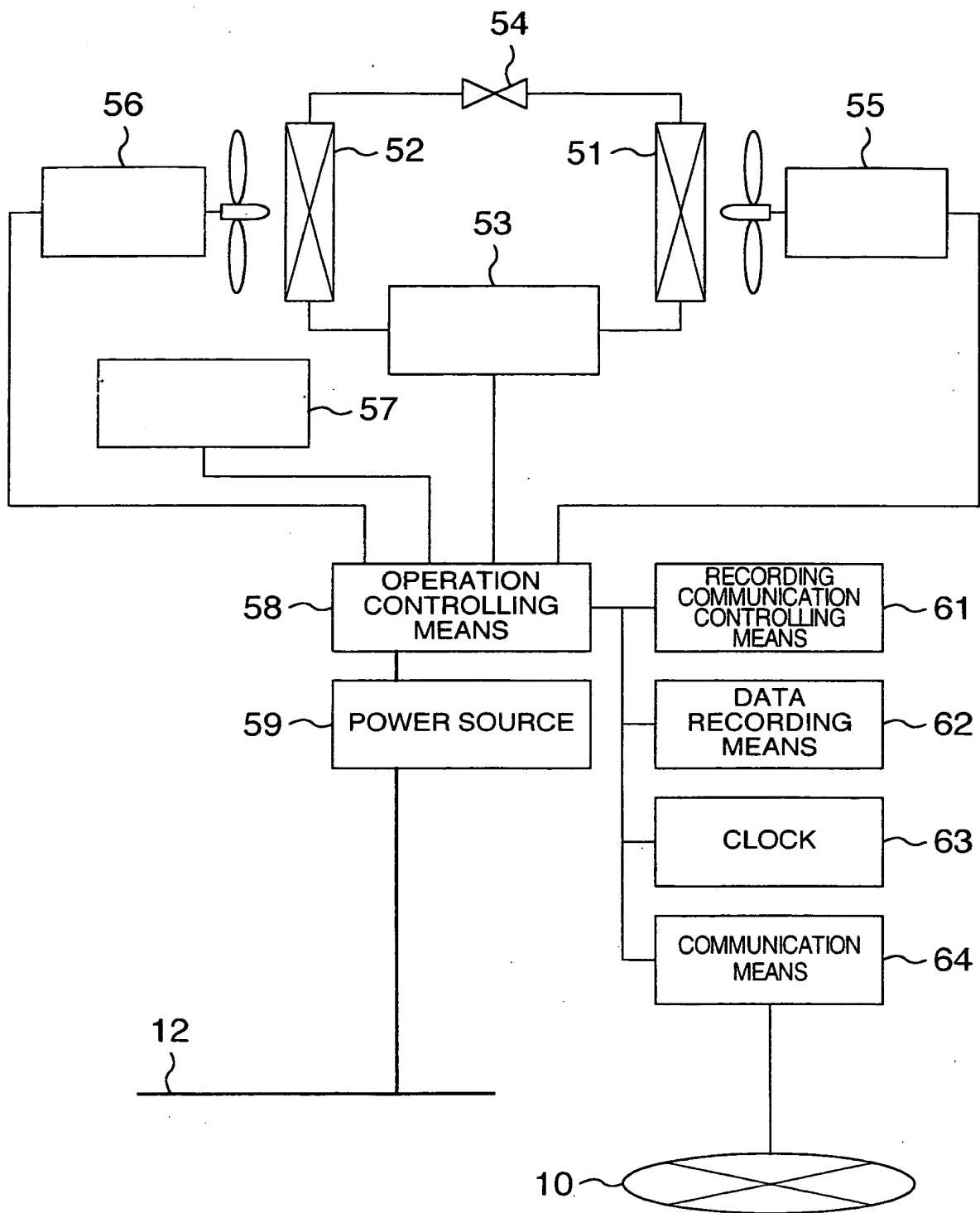
[FIG.3]



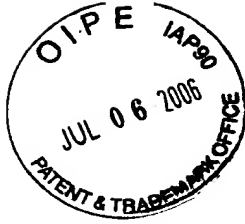
[Fig. 4]



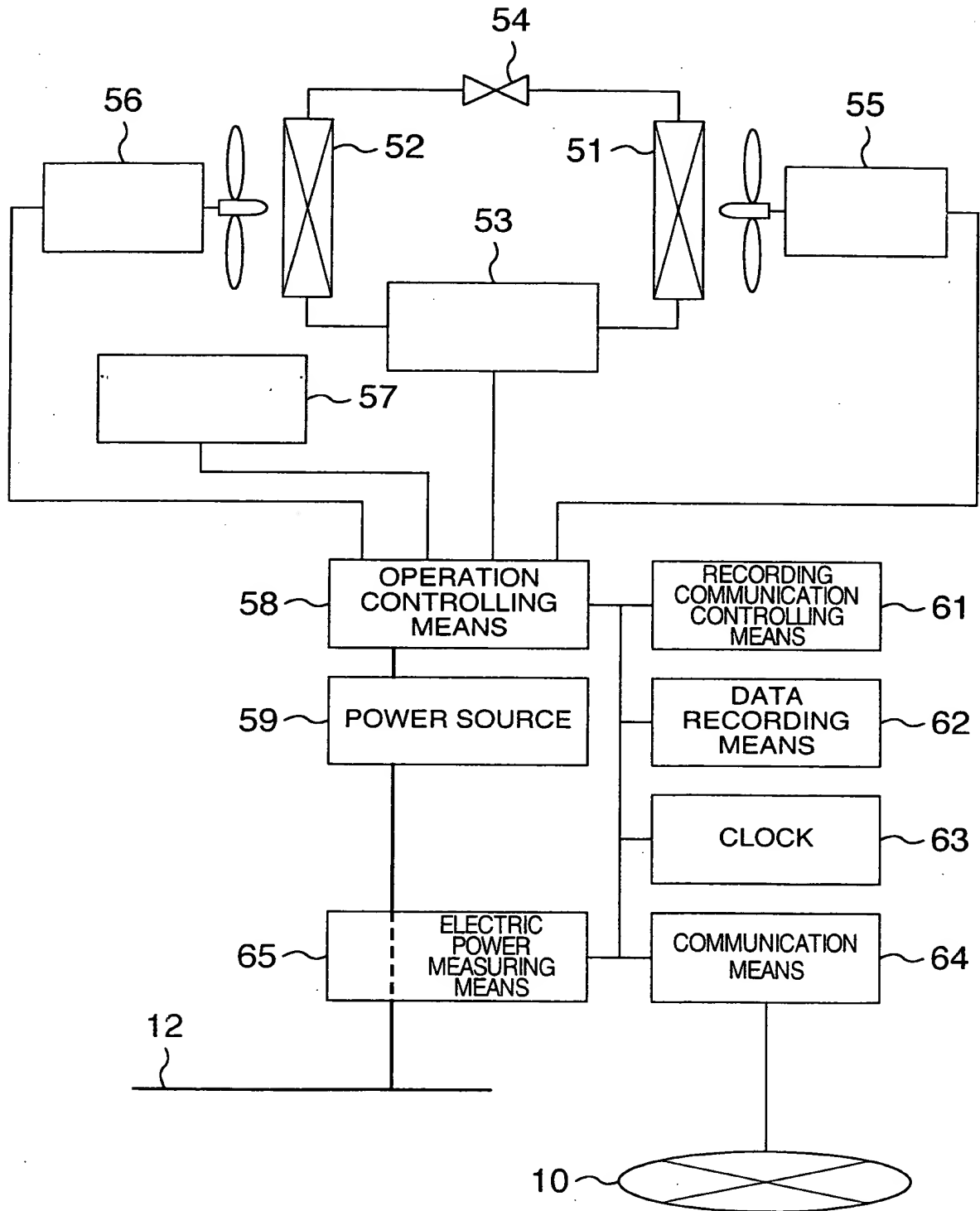
[FIG.4]



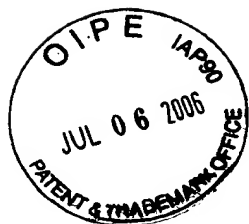
[Fig. 5]



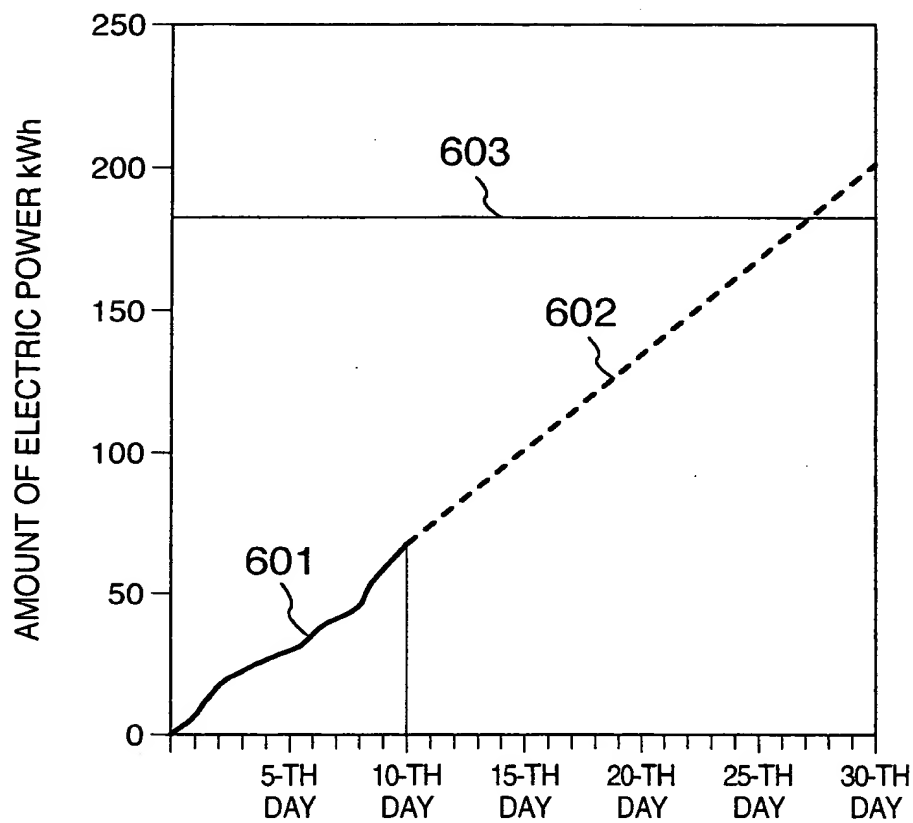
[FIG.5]



[Fig.6]



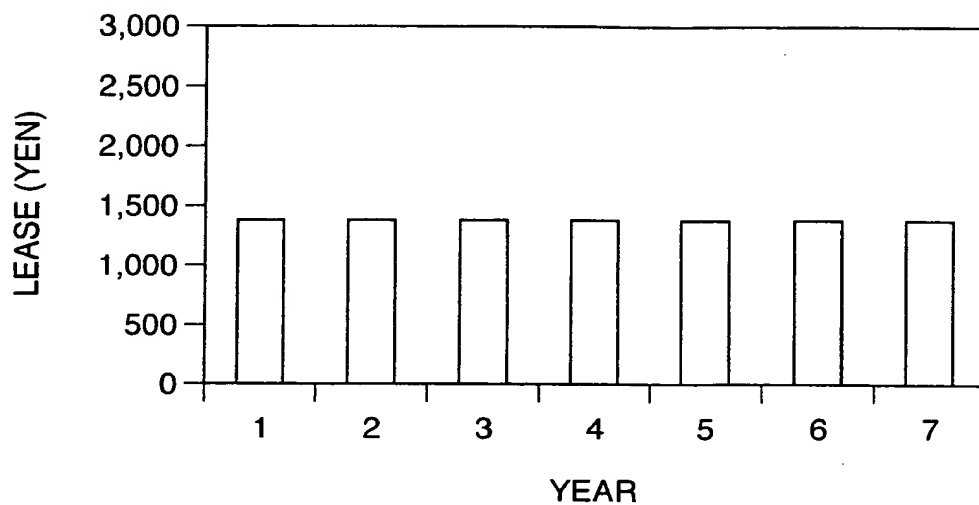
[FIG.6]



[Fig. 7]

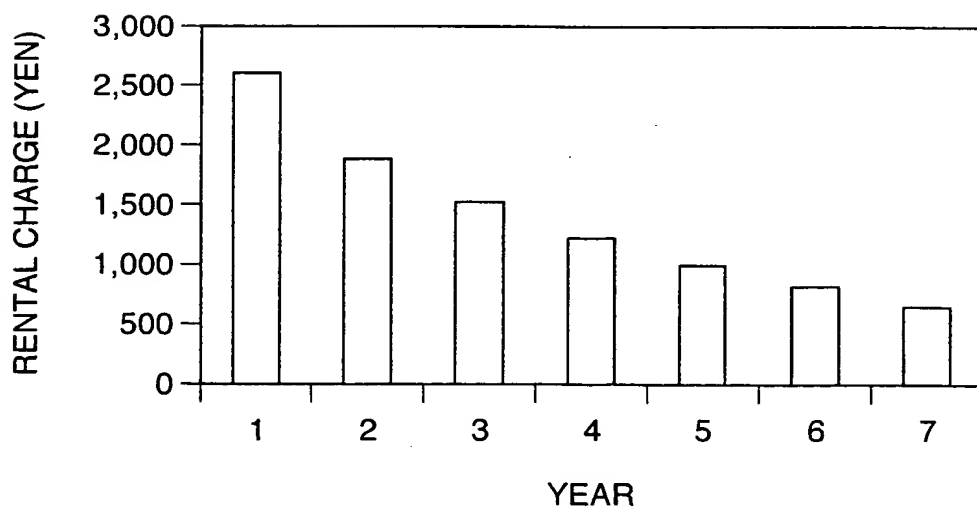


[FIG.7]

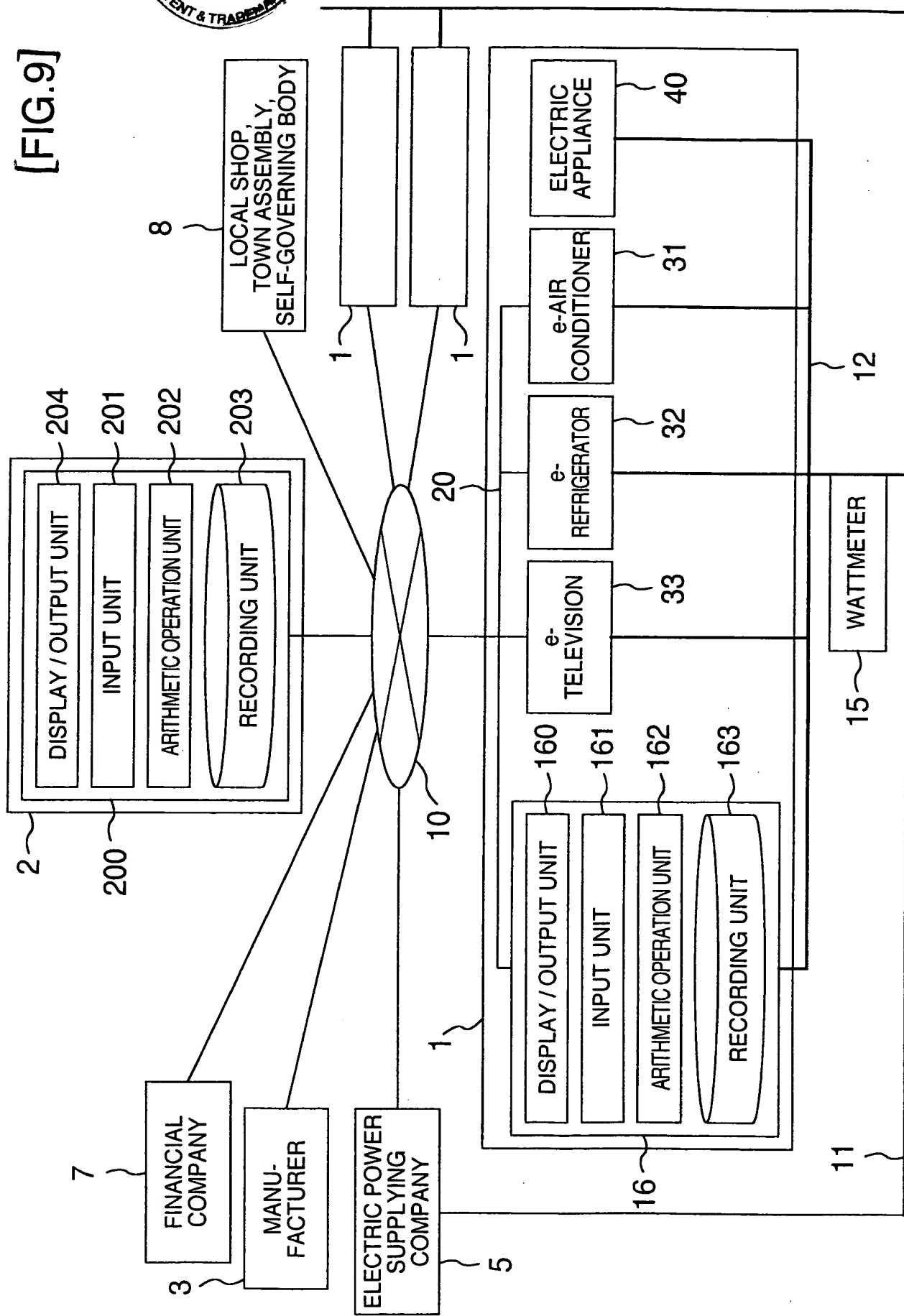


[Fig. 8]

[FIG.8]



**[FIG. 9]**







[Kind of Document]     Abstract

[Abstract]

[Problem]

To realize a system which allows a user of electric appliances to reduce an initial investment.

[Solution]

A user contractor 1 leases an e-information terminal 16 together with an e-air conditioner 31, an e-refrigerator 32 and an e-television 33 from a service providing company 2. The work information of these electric appliances is sent from the e-information terminal to a rent managing server 200, which the service providing company possesses, through the Internet 10. The rent managing server sends payment for the rent inclusive of the electric power rate of the rented electric appliances to the e-information terminal.

[Selected Drawing]     Fig. 1